Ages of Adult Atlantic Salmon, Sampled from Various Restigouche River Sources, 1972-81

P.R. Pickard

Freshwater and Anadromous Division
Fisheries Research Branch
Department of Fisheries and Oceans
Halifax, Nova Scotia B3J 2S7

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P.R. Pickard

Freshwater and Anadromous Division
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Department of Fisheries and Oceans
Halifax, Nova Scotia
B3J 2S7

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ABSTRACT

Pickard, P.R. 1983. Ages of adult Atlantic salmon sampled from various Restigouche River sources, 1972-81. Can. Data Rep. Fish. Aquat. Sci. No. 420. viii + 25 p.

Ages of Atlantic salmon were determined from scale samples collected during the 1972-75 and 1978-81 angling seasons, and the 1980 and 1981 post-angling seasons. Most samples were obtained from sport fisheries of the Upsalquitch, Northwest Upsalquitch, Southeast Upsalquitch, Patapedia, Little Main Restigouche, Kedgwick and main Restigouche rivers, of the Restigouche River system. In addition, ages of previously spawned salmon were determined from ten years (1972-81) of scale samples. Scales originated from sampling programs conducted by the New Brunswick Fish and Wildlife Branch, Department of Natural Resources, and the Freshwater and Anadromous Division of the Fisheries Research Branch.

Key words: Atlantic salmon, angling, scale samples, scale reading, freshwater (smolt) age, sea age, age structure, previously spawned salmon.

RÉSUMÉ

Pickard, P.R. 1983. Ages of adult Atlantic salmon sampled from various Restigouche River sources, 1972-81. Can. Data Rep. Fish. Aquat. Sci. No. 420. viii + 25 p.

Des échantillons d'écailles recueillis au cours des saisons de pêche récréative de 1972-75 et 1978-81, et des après-saisons de 1980 et 1981 ont servi à déterminer l'âge des saumons atlantiques. La plupart des échantillons ont été prélevés sur des poissons capturés à la ligne dans les rivières Upsalquitch, Upsalquitch nord-ouest, Upsalquitch sud-est, Patapedia, Petite Restigouche principale, Kedgwick et Restigouche principale du réseau de la Restigouche. L'âge de saumons qui avaient déjà frayé a été en outre déterminé à partir d'écailles recueillis pendant une période de dix ans (1972-81). Ces collections résultaient de programmes d'échantillonnage réalisés par la Direction du poisson et de la faune, ministère des Richesses naturelles du Nouveau-Brunswick, et la division des poisson d'eau douce et espèces anadromes de la Direction de la recherche sur les pêches.

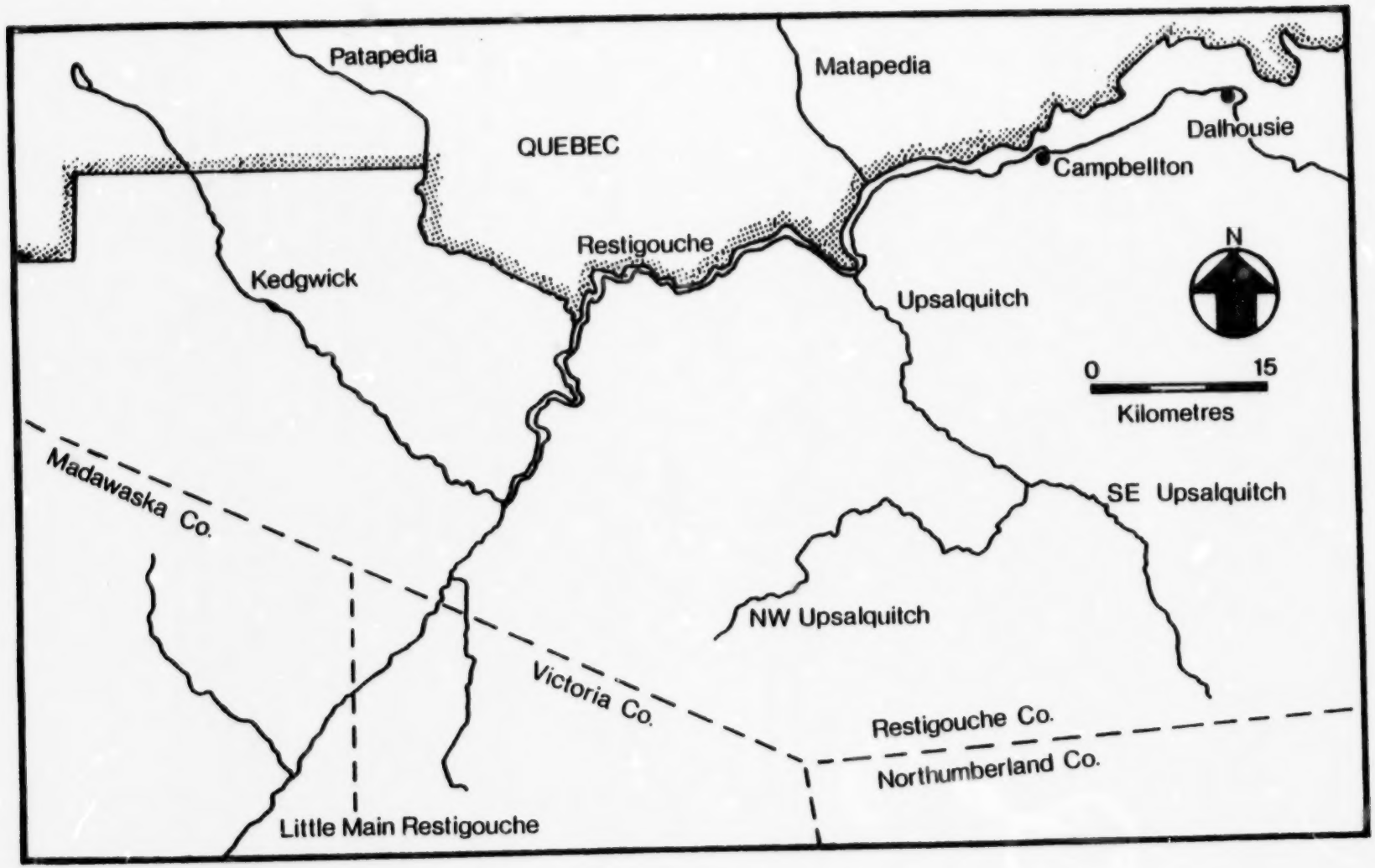

FIG. Map of Restigouche River system, New Brunswick.

INTRODUCTION

This report presents data on the ages of Atlantic salmon collected in 1972-75 (new and/or revised additional samples received since March, 1979, and previously omitted samples) and 1978-81 from sport fisheries (mainly) of the Upsalquitch, Northwest Upsalquitch, Southeast Upsalquitch, Patapedia, Little Main Restigouche, Kedgwick and main Restigouche rivers of the Restigouche River system, New Brunswick (Fig.). Data collected in 1972-77 have been previously presented (Peppar et al. 1976 and Pickard 1979).

The majority of the samples originated from a sampling program conducted by the New Brunswick Fish and Wildlife Branch (Department of Natural Resources) throughout the sport fisheries of the Restigouche River system during the 1972-81 angling seasons. This sampling program is conducted each year as part of their general census of sport-fishery statistics of the Restigouche River system. Length, weight and sex are recorded and scale samples are obtained from angled fish. Additional samples originated from an angling survey conducted by the Freshwater and Anadromous Division of the Fisheries Research Branch on the Little Main Restigouche River during the 1975 and 1976 angling seasons (Peppar 1977); from a salmon-protection and stock-rebuilding program conducted by the New Brunswick Fish and Wildlife Branch on the Northwest Upsalquitch River since 1979 (Madden 1980, unpublished); and from broodstock collected by the Fisheries Research Branch from the Kedgwick River in 1980 and 1981.

Generally at the close of each angling season (1972-81), scale samples were forwarded to the Fisheries Research Branch for subsequent examination. All ages were determined by scale reading.

METHODS AND PRESENTATION OF DATA

Each scale sample was examined under a binocular microscope and those scales with suitable (entire) centres were subsequently impressed on acetate slides. To read the scales, a micro-projector was employed to project the scale image on a white background.

All scale samples were independently read twice; additional readings were made of those samples in which the first two readings disagreed, and final ages were assigned on the basis of majority agreement. Differences in sample sizes recorded in Tables 1-14 reflect the proportion of scales for which smolt and/or sea ages could not be determined, as well as samples with no date. Of the 1,715 scale samples read (Tables 1-14), 19 (1.1%) did not provide suitable centres for determination of freshwater age, 1 (0.1%) was eroded too badly for determination of sea age and 25 (1.5%) had no date. Differences in sample sizes recorded in Tables 17-20 and 25-28 reflect the proportion of scales from previously spawned salmon for which smolt age could not be determined. Of the 133 previously spawned salmon scale samples read, 1 (0.8%) did not provide a suitable centre for determination of freshwater age. As a result of updated corrections (March 1982), Tables 15-20 and 25-28 may also indicate differences in percentages and/or in sample sizes of previously spawned salmon from those presented for 1972-77 in earlier reports.

The method used to record data in the first section (Tables 1-14) of this report divides total age into two parts - freshwater (smolt) and sea ages; for example, a fish recorded as "3.2" has spent three years in fresh water and all or part of the succeeding two years in the sea. This is commonly referred to as a "two-sea-winter" salmon. In the previously spawned salmon section (Tables 15-28), total age is divided into three parts - freshwater (smolt), sea and spawning ages; for example, a fish recorded as "3.4,2" has spent three years in fresh water and most of the succeeding four years in the sea except for a previous spawning trip as a "two-sea-winter" salmon.

In presenting the age-composition data, grilse (fish returning to spawn after spending only one winter at sea) and large salmon (fish returning to spawn after spending two or more winters at sea) are treated separately in Tables 1-14. Previously spawned fish are "lumped" in Tables 1, 8 and 15-18, regardless of at what age they spawned or how many times they had previously spawned. In Tables 2, 9, 19 and 20, the previously spawned fish have been separated according to their sea age when entering the river for the first time. Tables 21-22 and 23-24 separate the previously spawned fish according to their sea age at second and third previous spawning trips, respectively. In Tables 25 and 26, the respawners have been separated according to their final age with regard to previous spawning marks. Remaining tables (3-7, 10-14 and 27-28) present final age (i.e., present age) at year of sampling, regardless of previous spawning.

TABLE 1. Percentage composition of sea ages of large salmon caught during successive semi-monthly periods on the Restigouche River system, 1972-75.

Semi-monthly period	No. of fish				Percent of sample											
					Maiden fish											
					Sea age - 2 yr				Sea age - 3 yr				Previous spawners			
	1972	1973	1974	1975	1972	1973	1974	1975	1972	1973	1974	1975	1972	1973	1974	1975
Northwest Upsalquitch River																
Jul 1-15	0	0	0	2	-	-	-	100.0	-	-	-	-	-	-	-	-
Aug 16-31	0	0	0	1	-	-	-	100.0	-	-	-	-	-	-	-	-
Overall	0	0	0	3	-	-	-	100.0	-	-	-	-	-	-	-	-
Southeast Upsalquitch River																
Aug 1-15	0	0	0	1	-	-	-	100.0	-	-	-	-	-	-	-	-
Overall	0	0	0	1	-	-	-	100.0	-	-	-	-	-	-	-	-
Patapedia River																
Jun 16-30	0	1	7	8	-	-	57.1	75.0	-	100.0	28.6	25.0	-	-	14.3	-
Jun 1-15	2	0	15	16	100.0	-	80.0	93.8	-	-	20.0	6.3	-	-	-	-
Jul 16-31	2	1	4	0	100.0	100.0	50.0	-	-	-	50.0	-	-	-	-	-
Overall	4	2	26	24	100.0	50.0	69.2	87.5	-	50.0	26.9	12.5	-	-	3.8	-
Little Main Restigouche River																
Jul 16-31	0	0	0	1	-	-	-	100.0	-	-	-	-	-	-	-	-
Overall	0	0	0	1	-	-	-	100.0	-	-	-	-	-	-	-	-

TABLE 2. Percentage composition of freshwater (smolt) ages in each sea-age group of large salmon caught in the Restigouche River system, 1972-75.

Sea age (years)	No. of fish				Percent of sample							
					Smolt age - 2 yr				Smolt age - 3 yr			
	1972	1973	1974	1975	1972	1973	1974	1975	1972	1973	1974	1975
Northwest Upsalquitch River												
2	0	0	0	3	-	-	-	66.7	-	-	-	33.3
Overall	0	0	0	3	-	-	-	66.7	-	-	-	33.3
Southeast Upsalquitch River												
2	0	0	0	1	-	-	-	100.0	-	-	-	-
Overall	0	0	0	1	-	-	-	100.0	-	-	-	-
Patapedia River												
2	4	1	19	20	-	-	26.3	25.0	100.0	100.0	73.7	75.0
3	0	1	6	2	-	-	-	50.0	-	100.0	100.0	50.0
Overall	4	2	25	22	-	-	20.0	27.3	100.0	100.0	80.0	72.7
Little Main Resitouche River												
2	0	0	0	1	-	-	-	100.0	-	-	-	-
Overall	0	0	0	1	-	-	-	100.0	-	-	-	-

TABLE 3. Age composition (age structure) of large salmon of the Restigouche River system, 1972-75.

Age structure	No of fish				Percent of sample			
	1972	1973	1974	1975	1972	1973	1974	1975
Northwest Upsalquitch River								
2.2	0	0	0	2	-	-	-	66.7
3.2	0	0	0	1	-	-	-	33.3
Overall	0	0	0	3	-	-	-	100.0
Southeast Upsalquitch River								
2.2	0	0	0	1	-	-	-	100.0
Overall	0	0	0	1	-	-	-	100.0
Patapedia River								
2.2	0	0	5	5	-	-	20.0	22.7
2.3	0	0	0	1	-	-	-	4.5
3.2	4	1	13	15	100.0	50.0	52.0	68.2
3.3	0	1	6	1	-	50.0	24.0	4.5
3.4	0	0	1	0	-	-	4.0	-
Overall	4	2	25	22	100.0	100.0	100.0	100.0
Little Main Restigouche River								
2.2	0	0	0	1	-	-	-	100.0
Overall	0	0	0	1	-	-	-	100.0

TABLE 4. Age composition (total age in years) of large salmon of the Restigouche River system, 1972-75.

Total age (years)	From spawning year				No. of fish				Percent of sample			
	1972	1973	1974	1975	1972	1973	1974	1975	1972	1973	1974	1975
Northwest Upsalquitch River												
4	-	-	-	1970	0	0	0	2	-	-	-	66.7
5	-	-	-	1969	0	0	0	1	-	-	-	33.3
Overall					0	0	0	3	-	-	-	100.0
Southeast Upsalquitch River												
4	-	-	-	1970	0	0	0	1	-	-	-	100.0
Overall					0	0	0	1	-	-	-	100.0
Patapedia River												
4	-	-	1969	1970	0	0	5	5	-	-	20.0	22.7
5	1966	1967	1968	1969	4	1	13	16	100.0	50.0	52.0	72.7
6	-	1966	1967	1968	0	1	6	1	-	50.0	24.0	4.5
7	-	-	1966	-	0	0	1	0	-	-	4.0	-
Overall					4	2	25	22	100.0	100.0	100.0	100.0
Little Main Restigouche River												
4	-	-	-	1970	0	0	0	1	-	-	-	100.0
Overall					0	0	0	1	-	-	-	100.0

TABLE 5. Numbers of grilse samples taken during successive semi-monthly periods on the Restigouche River system, 1972-74.

Semi-monthly period	Patapedia River		
	1972	1973	1974
Jul 1-15	0	0	3
Jul 16-31	2	1	4
Aug 1-15	6	0	0
Sep 1-15	2	0	0
Overall	10	1	7

TABLE 6. Percentage composition of freshwater (smolt) ages of grilse caught in the Restigouche River system, 1972-74.

No. of fish			Percent of sample					
			Smolt age - 2 yr			Smolt age - 3 yr		
1972	1973	1974	1972	1973	1974	1972	1973	1974
Patapedia River								
10	1	7	10.0	-	-	90.0	100.0	100.0

TABLE 7. Age composition (age structure and total age in years) of grilse of the Restigouche River system, 1972-74.

Age structure	Total age (yr)	From spawning year			No. of fish			Percent of sample		
		1972	1973	1974	1972	1973	1974	1972	1973	1974
Patapedia River										
2.1	3	1968	-	-	1	0	0	10.0	-	-
3.1	4	1967	1968	1969	9	1	7	90.0	100.0	100.0
Overall					10	1	7	100.0	100.0	100.0

TABLE 8. Percentage composition of sea ages of large salmon caught during successive semi-monthly periods on the Restigouche River system, 1978-81.

Semi-monthly period	No. of fish				Percent of sample											
					Maiden fish											
					Sea age - 2 yr				Sea age - 3 yr				Previous spawners			
	1978	1979	1980	1981	1978	1979	1980	1981	1978	1979	1980	1981	1978	1979	1980	1981
Upsalquitch River																
Jun 1-15	5	0	0	0	60.0	-	-	-	20.0	-	-	-	20.0	-	-	-
Jun 16-30	24	2	8	5	95.8	100.0	87.5	60.0	-	-	-	20.0	4.2	-	12.5	20.0
Jul 1-15	15	7	36	20	93.3	71.4	100.0	90.0	-	-	-	5.0	6.7	28.6	-	5.0
Jul 16-31	12	3	52	8	100.0	33.3	92.3	87.5	-	-	1.9	-	-	66.7	5.8	12.5
Aug 1-15	30	5	29	2	90.0	100.0	93.1	100.0	6.7	-	-	-	3.3	-	6.9	-
Aug 16-31	7	1	14	2	100.0	100.0	92.9	100.0	-	-	-	-	-	-	7.1	-
Overall	93	18	139	37	92.5	77.8	94.2	86.5	3.2	-	0.7	5.4	4.3	22.2	5.0	8.1
Northwest Upsalquitch River[1]																
Jun 16-30	0	0	3	0	-	-	100.0	-	-	-	-	-	-	-	-	-
Jul 1-15	2	4	25	6	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-	-
Jul 16-31	1	2	38	12	100.0	100.0	97.4	75.0	-	-	-	16.7	-	-	2.6	8.3
Aug 1-15	1	1	17	0	100.0	100.0	100.0	-	-	-	-	-	-	-	-	-
Aug 16-31	0	0	2	0	-	-	100.0	-	-	-	-	-	-	-	-	-
Sep 1-15	0	0	0	1	-	-	-	-	-	-	-	100.0	-	-	-	-
Sep 16-30	0	0	0	1	-	-	-	-	-	-	-	-	-	-	-	100.0
Oct 1-15	0	0	0	7	-	-	-	14.3	-	-	-	-	-	-	-	85.7
Overall	4	7	85	27	100.0	100.0	98.8	59.3	-	-	-	11.1	-	-	1.2	29.6
Southeast Upsalquitch River																
Jun 16-30	0	0	1	1	-	-	-	100.0	-	-	100.0	-	-	-	-	-
Jul 1-15	5	2	4	2	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-	-
Jul 16-31	1	1	5	0	100.0	100.0	100.0	-	-	-	-	-	-	-	-	-
Aug 1-15	0	0	4	0	-	-	100.0	-	-	-	-	-	-	-	-	-
Aug 16-31	0	0	1	0	-	-	100.0	-	-	-	-	-	-	-	-	-
Overall	6	3	15	3	100.0	100.0	93.3	100.0	-	-	6.7	-	-	-	-	-
Patapedia River																
Jun 1-15	0	4	1	3	-	50.0	100.0	-	-	25.0	-	66.7	-	25.0	-	33.3
Jun 16-30	0	9	9	4	-	55.6	100.0	25.0	-	44.4	-	75.0	-	-	-	-
Jul 1-15	0	8	8	2	-	37.5	100.0	50.0	-	62.5	-	50.0	-	-	-	-
Jul 16-31	0	1	4	0	-	-	100.0	-	-	100.0	-	-	-	-	-	-
Aug 1-15	0	0	3	0	-	-	100.0	-	-	-	-	-	-	-	-	-
Aug 16-31	0	0	4	0	-	-	75.0	-	-	-	25.0	-	-	-	-	-
Overall	0	22	29	9	-	45.5	96.6	22.2	-	50.0	3.4	66.7	-	4.6	-	11.1
Kedgwick River[2]																
Jun 1-15	4	5	0	0	25.0	40.0	-	-	75.0	40.0	-	-	-	20.0	-	-
Jun 16-30	8	1	0	0	75.0	100.0	-	-	25.0	-	-	-	-	-	-	-
Jul 1-15	5	2	0	0	80.0	-	-	-	20.0	100.0	-	-	-	-	-	-
Jul 16-31	3	2	0	0	66.7	50.0	-	-	33.3	50.0	-	-	-	-	-	-
Aug 1-15	1	3	0	0	-	-	-	-	100.0	100.0	-	-	-	-	-	-
Aug 16-31	0	3	0	0	-	100.0	-	-	-	-	-	-	-	-	-	-
Oct 16-31	0	0	58	17	-	-	27.6	52.9	-	-	31.0	29.4	-	-	41.4	17.6
Overall	21	16	58	17	61.9	43.8	27.6	52.9	38.1	50.0	31.0	29.4	-	6.3	41.4	17.6
estigouche River[3]																
Jun 16-30	0	0	0	10	-	-	-	-	-	-	-	90.0	-	-	-	10.0
Jul 1-15	0	0	0	19	-	-	-	-	-	-	-	100.0	-	-	-	-
Jul 16-31	0	0	0	2	-	-	-	-	-	-	-	100.0	-	-	-	-
Aug 1-15	0	0	0	6	-	-	-	-	-	-	-	100.0	-	-	-	-
Aug 16-31	0	0	0	4	-	-	-	-	-	-	-	-	-	-	-	100.0
Overall	0	0	0	41	-	-	-	-	-	-	-	87.8	-	-	-	12.2

[1]1981 samples after August 31 were purposely taken from fairly large salmon.
[2]1980 and 1981 samples were taken from broodstock.
[3]1981 samples were purposely taken from 7.2-kg and over salmon.

TABLE 9. Percentage composition of freshwater (smolt) ages in each sea-age group of large salmon caught in the Restigouche River system, 1978-81.

Sea age (years)	No. of fish				Percent of sample: Smolt age - 2 yr				Smolt age - 3 yr				Smolt age - 4 yr			
	1978	1979	1980	1981	1978	1979	1980	1981	1978	1979	1980	1981	1978	1979	1980	1981
Upsalquitch River																
1	3	4	5	2	-	25.0	-	50.0	100.0	75.0	100.0	50.0	-	-	-	-
2	87	12	134	32	5.7	8.3	17.9	18.8	92.0	91.7	77.6	75.0	2.3	-	4.5	6.3
3	3	0	2	2	66.7	-	-	-	33.3	-	100.0	100.0	-	-	-	-
Overall	93	16	141	36	7.5	12.5	17.0	19.4	90.3	87.5	78.7	75.0	2.2	-	4.3	5.6
Northwest Upsalquitch River[1]																
1	0	0	1	1	-	-	-	-	-	-	100.0	100.0	-	-	-	-
2	4	8	85	22	-	25.0	20.0	31.8	100.0	75.0	78.8	68.2	-	-	1.2	-
3	0	0	0	3	-	-	-	33.3	-	-	-	66.7	-	-	-	-
Overall	4	8	86	26	-	25.0	19.8	30.8	100.0	75.0	79.1	69.2	-	-	1.2	-
Southeast Upsalquitch River																
2	6	3	14	4	-	66.7	35.7	25.0	100.0	33.3	64.3	75.0	-	-	-	-
3	0	0	1	0	-	-	-	-	-	-	100.0	-	-	-	-	-
Overall	6	3	15	4	-	66.7	33.3	25.0	100.0	33.3	66.7	75.0	-	-	-	-
Patapedia River																
2	0	10	31	2	-	-	-	-	-	70.0	80.6	50.0	-	30.0	19.4	50.0
3	0	12	3	7	-	-	-	-	-	83.3	100.0	71.4	-	16.7	-	28.6
Overall	0	22	34	9	-	-	-	-	-	77.3	82.4	66.7	-	22.7	17.6	33.3
Kedgwick River[2]																
1	0	0	1	2	-	-	-	-	-	-	100.0	100.0	-	-	-	-
2	13	8	26	9	-	-	-	11.1	100.0	100.0	96.2	88.9	-	-	3.8	-
3	8	8	30	5	25.0	12.5	6.7	40.0	75.0	87.5	86.7	60.0	-	-	6.7	-
Overall	21	16	57	16	9.5	6.3	3.5	18.8	90.5	93.8	91.2	81.3	-	-	5.3	-
Restigouche River[3]																
2	0	0	0	1	-	-	-	-	-	-	-	100.0	-	-	-	-
3	0	0	0	38	-	-	-	5.3	-	-	-	94.7	-	-	-	-
Overall	0	0	0	39	-	-	-	5.1	-	-	-	94.9	-	-	-	-

[1]1981 samples after Aug 31 were purposely taken from fairly large salmon.
[2]1980 and 1981 samples were taken from broodstock.
[3]1981 samples were purposely taken from 7.2-kg and over salmon.

TABLE 10. Age composition (age structure) of large salmon of the Restigouche River system, 1978-81.

Age structure	No. of fish				Percent of sample			
	1978	1979	1980	1981	1978	1979	1980	1981
Upsalquitch River								
2.2	5	1	24	7	5.4	6.3	17.0	19.4
2.3	2	1	0	0	2.2	6.3	-	-
3.2	79	11	107	23	84.9	68.8	75.9	63.9
3.3	4	3	1	4	4.3	18.8	0.7	11.1
3.4	1	0	2	0	1.1	-	1.4	-
3.5	0	0	1	0	-	-	0.7	-
4.2	2	0	6	2	2.2	-	4.3	5.6
Overall	93	16	141	36	100.0	100.0	100.0	100.0
Northwest Upsalquitch River[1]								
2.2	0	2	17	4	-	25.0	19.8	15.4
2.3	0	0	0	2	-	-	-	7.7
2.6	0	0	0	2	-	-	-	7.7
3.2	4	6	68	11	100.0	75.0	79.1	42.3
3.3	0	0	0	3	-	-	-	11.5
3.4	0	0	0	3	-	-	-	11.5
3.6	0	0	0	1	-	-	-	3.8
4.2	0	0	1	0	-	-	1.2	-
Overall	4	8	86	26	100.0	100.0	100.0	100.0
Southeast Upsalquitch River								
2.2	0	2	5	1	-	66.7	33.3	25.0
3.2	6	1	9	3	100.0	33.3	60.0	75.0
3.3	0	0	1	0	-	-	6.7	-
Overall	6	3	15	4	100.0	100.0	100.0	100.0
Patapedia River								
3.2	0	7	25	1	-	31.8	73.5	11.1
3.3	0	9	3	5	-	40.9	8.8	55.6
3.5	0	1	0	0	-	4.6	-	-
4.2	0	3	6	1	-	13.6	17.6	11.1
4.3	0	2	0	1	-	9.1	-	11.1
4.5	0	0	0	1	-	-	-	11.1
Overall	0	22	34	9	-	100.0	100.0	100.0
Kedgwick River[2]								
2.2	0	0	0	1	-	-	-	6.3
2.3	2	1	1	2	9.5	6.3	1.8	12.5
2.5	0	0	1	0	-	-	1.8	-
3.2	13	7	14	7	61.9	43.8	24.6	43.8
3.3	6	7	17	5	28.6	43.8	29.8	31.3
3.4	0	1	11	1	-	6.3	19.3	6.3
3.5	0	0	8	0	-	-	14.0	-
3.7	0	0	2	0	-	-	3.5	-
4.2	0	0	1	0	-	-	1.8	-
4.3	0	0	1	0	-	-	1.8	-
4.5	0	0	1	0	-	-	1.8	-
Overall	21	16	57	16	100.0	100.0	100.0	100.0
Restigouche River[3]								
2.3	0	0	0	1	-	-	-	2.6
2.7	0	0	0	1	-	-	-	2.6
3.3	0	0	0	34	-	-	-	87.2
3.4	0	0	0	1	-	-	-	2.6
3.5	0	0	0	2	-	-	-	5.1
Overall	0	0	0	39	-	-	-	100.0

[1]1981 samples after Aug 31 were purposely taken from fairly large salmon.
[2]1980 and 1981 samples were taken from broodstock.
[3]1981 samples were purposely taken from 7.2-kg and over salmon.

TABLE 11. Age composition (total age in years) of large salmon of the Restigouche River system, 1978-81.

Total age (years)	From spawning year				No. of fish				Percent of sample			
	1978	1979	1980	1981	1978	1979	1980	1981	1978	1979	1980	1981
Upsalquitch River												
4	1973	1974	1975	1976	5	1	24	7	5.4	6.3	17.0	19.4
5	1972	1973	1974	1975	81	12	107	23	87.1	75.0	75.9	63.9
6	1971	1972	1973	1974	6	3	7	6	6.5	18.8	5.0	16.7
7	1970	-	1972	-	1	0	2	0	1.1	-	1.4	-
8	-	-	1971	-	0	0	1	0	-	-	0.7	-
Overall					93	16	141	36	100.0	100.0	100.0	100.0
Northwest Upsalquitch River[1]												
4	-	1974	1975	1976	0	2	17	4	-	25.0	19.8	15.4
5	1972	1973	1974	1975	4	6	68	13	100.0	75.0	79.1	50.0
6	-	-	1973	1974	0	0	1	3	-	-	1.2	11.5
7	-	-	-	1973	0	0	0	3	-	-	-	11.5
8	-	-	-	1972	0	0	0	2	-	-	-	7.7
9	-	-	-	1971	0	0	0	1	-	-	-	3.8
Overall					4	8	86	26	100.0	100.0	100.0	100.0
Southeast Upsalquitch River												
4	-	1974	1975	1976	0	2	5	1	-	66.7	33.3	25.0
5	1972	1973	1974	1975	6	1	9	3	100.0	33.3	60.0	75.0
6	-	-	1973	-	0	0	1	0	-	-	6.7	-
Overall					6	3	15	4	100.0	100.0	100.0	100.0
Patapedia River												
5	-	1973	1974	1975	0	7	25	1	-	31.8	73.5	11.1
6	-	1972	1973	1974	0	12	9	6	-	54.6	26.5	66.7
7	-	1971	-	1973	0	2	0	1	-	9.1	-	11.1
8	-	1970	-	-	0	1	0	0	-	4.6	-	-
9	-	-	-	1971	0	0	0	1	-	-	-	11.1
Overall					0	22	34	9	-	100.0	100.0	100.0
Kedgwick River[2]												
4	-	-	-	1976	0	0	0	1	-	-	-	6.3
5	1972	1973	1974	1975	15	8	15	9	71.4	50.0	26.3	56.3
6	1971	1972	1973	1974	6	7	18	5	28.6	43.8	31.6	31.3
7	-	1971	1972	1973	0	1	13	1	-	6.3	22.8	6.3
8	-	-	1971	-	0	0	8	0	-	-	14.0	-
9	-	-	1970	-	0	0	1	0	-	-	1.8	-
10	-	-	1969	-	0	0	2	0	-	-	3.5	-
Overall					21	16	57	16	100.0	100.0	100.0	100.0
Restigouche River[3]												
5	-	-	-	1975	0	0	0	1	-	-	-	2.6
6	-	-	-	1974	0	0	0	34	-	-	-	87.2
7	-	-	-	1973	0	0	0	1	-	-	-	2.6
8	-	-	-	1972	0	0	0	2	-	-	-	5.1
9	-	-	-	1971	0	0	0	1	-	-	-	2.6
Overall					0	0	0	39	-	-	-	100.0

[1]1981 samples after Aug 31 were purposely taken from fairly large salmon.
[2]1980 and 1981 samples were taken from broodstock.
[3]1981 samples were purposely taken from 7.2-kg and over salmon.

TABLE 12. Numbers of grilse samples taken during successive semi-monthly periods on the Restigouche River system, 1978-81.

Semi-monthly period	1978	1979	1980	1981
Upsalquitch River				
Jun 1-15	1	0	0	0
Jun 16-30	10	3	0	5
Jul 1-15	16	14	63	38
Jul 16-31	26	19	110	27
Aug 1-15	20	27	53	17
Aug 16-31	6	27	20	13
Overall	79	90	246	100
Northwest Upsalquitch River				
Jun 16-30	1	0	0	0
Jul 1-15	1	11	24	12
Jul 16-31	4	9	28	50
Aug 1-15	8	6	30	5
Aug 16-31	1	8	2	5
Sep 1-15	0	0	0	1
Sep 16-30	0	0	0	3
Overall	15	34	84	76
Southeast Upsalquitch River				
Jul 1-15	2	1	8	21
Jul 16-31	3	10	26	19
Aug 1-15	12	5	24	12
Aug 16-31	11	8	2	0
Overall	28	24	60	52
Patapedia River				
Jun 16-30	0	1	1	0
Jul 1-15	0	12	5	1
Jul 16-31	0	8	2	0
Aug 1-15	0	7	4	0
Aug 16-31	0	2	4	0
Overall	0	30	16	1
Kedgwick River				
Jun 16-30	0	1	0	0
Jul 1-15	1	0	0	0
Jul 16-31	1	10	0	0
Aug 1-15	0	9	0	0
Aug 16-31	0	3	0	0
Overall	2	23	0	0

TABLE 13. Percentage composition of freshwater (smolt) ages of grilse caught in the Restigouche River system, 1978-81.

No. of fish				Percent of sample											
				Smolt age - 2 yr				Smolt age - 3 yr				Smolt age - 4 yr			
1978	1979	1980	1981	1978	1979	1980	1981	1978	1979	1980	1981	1978	1979	1980	1981
Upsalquitch River															
79	92	243	100	15.2	12.0	9.5	10.0	79.8	87.0	84.4	85.0	5.1	1.1	6.2	5.0
Northwest Upsalquitch River															
16	36	84	76	25.0	2.8	15.5	25.0	75.0	97.2	77.4	73.7	-	-	7.1	1.3
Southeast Upsalquitch River															
28	24	60	53	21.4	4.2	11.7	5.7	78.6	95.8	88.3	94.3	-	-	-	-
Patapedia River															
0	34	16	1	-	-	-	-	-	94.1	87.5	100.0	-	5.9	12.5	-
Kedgwick River															
2	23	0	0	50.0	8.7	-	-	50.0	87.0	-	-	-	4.4	-	-

TABLE 14. Age composition (age structure and total age in years) of grilse of the Restigouche River system, 1978-81.

Age structure	Total age (yr)	From spawning year				No. of fish				Percent of sample			
		1978	1979	1980	1981	1978	1979	1980	1981	1978	1979	1980	1981
Upsalquitch River													
2.1	3	1974	1975	1976	1977	12	11	23	10	15.2	12.0	9.5	10.0
3.1	4	1973	1974	1975	1976	63	80	205	85	79.8	87.0	84.4	85.0
4.1	5	1972	1973	1974	1975	4	1	15	5	5.1	1.1	6.2	5.0
Overall						79	92	243	100	100.0	100.0	100.0	100.0
Northwest Upsalquitch River													
2.1	3	1974	1975	1976	1977	4	1	13	19	25.0	2.8	15.5	25.0
3.1	4	1973	1974	1975	1976	12	35	65	56	75.0	97.2	77.4	73.7
4.1	5	-	-	1974	1975	0	0	6	1	-	-	7.1	1.3
Overall						16	36	84	76	100.0	100.0	100.0	100.0
Southeast Upsalquitch River													
2.1	3	1974	1975	1976	1977	6	1	7	3	21.4	4.2	11.7	5.7
3.1	4	1973	1974	1975	1976	22	23	53	50	78.6	95.8	88.3	94.3
Overall						28	24	60	53	100.0	100.0	100.0	100.0
Patapedia River													
3.1	4	-	1974	1975	1976	0	32	14	1	-	94.1	87.5	100.0
4.1	5	-	1973	1974	-	0	2	2	0	-	5.9	12.5	-
Overall						0	34	16	1	-	100.0	100.0	100.0
Kedgwick River													
2.1	3	1974	1975	-	-	1	2	0	0	50.0	8.7	-	-
3.1	4	1973	1974	-	-	1	20	0	0	50.0	87.0	-	-
4.1	5	-	1973	-	-	0	1	0	0	-	4.4	-	-
Overall						2	23	0	0	100.0	100.0	-	-

TABLE 15. Percentage previous spawners of total sample (large salmon) on the Restigouche River system, 1972-76.

1972		1973		1974		1975		1976	
Percent previous spawners	Total sample	Percent previous spawners	Total sample	Percent previous spawners	Total sample	Percent previous spawners	Total sample	Percent previous spawners	Total sample
Upsalquitch River									
3.2	127	7.6	66	1.5	66	1.9	103	2.2	185
Northwest Upsalquitch River									
3.3	60	-	15	3.9	26	-	3	22.2	9
Southeast Upsalquitch River									
-	11	-	2	-	0	-	1	-	1
Patapedia River									
-	4	-	2	3.8	26	-	24	-	0
Little Main Restigouche River									
1.7	59	-	28	2.8	36	-	1	20.0	10
Kedgwick River									
3.0	203	1.1	191	2.3	171	1.5	138	19.5	123
Restigouche River									
-	0	-	0	-	0	-	0	-	0

TABLE 16. Percentage previous spawners of total sample (large salmon) on the Restigouche River System, 1977-81.

1977		1978		1979		1980		1981		Overall (1972-81)[1]	
Percent previous spawners	Total sample	Percent previous spawners	Total sample	Percent previous spawners	Total sample	Percent previous spawners	Total sample	Percent previous spawners	Total sample	Percent previous spawners	Total sample
Upsalquitch River											
2.9	138	4.3	93	22.2	18	5.0	139	8.1	37	3.9	972
Northwest Upsalquitch River[2]											
-	45	-	4	-	7	1.2	85	29.6	27	5.0	281
Southeast Upsalquitch River											
12.5	8	-	6	-	3	-	15	-	3	2.0	50
Patapedia River											
6.3	16	-	0	4.6	22	-	29	11.1	9	3.0	132
Little Main Restigouche River											
-	0	-	0	-	0	-	0	-	0	3.0	134
Kedgwick River[3]											
3.0	33	-	21	6.3	16	41.4	58	17.6	17	6.9	971
Restigouche River[4]											
-	0	-	0	-	0	-	0	12.2	41	12.2	41

[1]Includes Table 15 data.
[2]1981 samples after Aug 31 were purposely taken from fairly large salmon.
[3]1980 and 1981 samples were taken from broodstock.
[4]1981 samples were purposely taken from 7.2-kg and over salmon.

TABLE 17. Percentages of total sample of previously spawned large salmon caught during successive semi-monthly periods on the Restigouche River system, 1972-76.

Semi-monthly period	Total number in sample					Percent of sample				
	1972	1973	1974	1975	1976	1972	1973	1974	1975	1976
Upsalquitch River										
Jun 16-30	1	0	0	0	4	25.0	-	-	-	100.0
Jul 1-15	1	0	0	1	0	25.0	-	-	50.0	-
Jul 16-31	2	0	1	1	0	50.0	-	100.0	50.0	-
Aug 1-15	0	5	0	0	0	-	100.0	-	-	-
Overall	4	5	1	2	4	100.0	100.0	100.0	100.0	100.0
Northwest Upsalquitch River										
Jun 16-30	2	0	0	0	1	100.0	-	-	-	50.0
Jul 16-31	0	0	1	0	0	-	-	100.0	-	-
Aug 1-15	0	0	0	0	1	-	-	-	-	50.0
Overall	2	0	1	0	2	100.0	-	100.0	-	100.0
Southeast Upsalquitch River										
Overall	0	0	0	0	0	-	-	-	-	-
Patapedia River										
Jun 16-30	0	0	1	0	0	-	-	100.0	-	-
Overall	0	0	1	0	0	-	-	100.0	-	-
Little Main Restigouche River										
Jul 16-31	0	0	1	0	0	-	-	100.0	-	-
Aug 1-15	1	0	0	0	0	100.0	-	-	-	-
Aug 16-31	0	0	0	0	2	-	-	-	-	100.0
Overall	1	0	1	0	2	100.0	-	100.0	-	100.0
Kedgwick River										
Jun 1-15	0	0	0	0	6	-	-	-	-	25.0
Jun 16-30	1	0	3	0	5	16.7	-	75.0	-	20.8
Jul 1-15	3	0	0	0	2	50.0	-	-	-	8.3
Jul 16-31	0	0	0	1	3	-	-	-	50.0	12.5
Aug 1-15	2	1	0	1	4	33.3	50.0	-	50.0	16.7
Aug 16-31	0	1	1	0	4	-	50.0	25.0	-	16.7
Overall	6	2	4	2	24	100.0	100.0	100.0	100.0	100.0
Restigouche River										
Overall	0	0	0	0	0	-	-	-	-	-

TABLE 18. Percentages of total sample of previously spawned large salmon caught during successive semi-monthly periods on the Restigouche River system, 1977-81.

Semi-monthly period	Total number in sample					Percent of sample				
	1977	1978	1979	1980	1981	1977	1978	1979	1980	1981
Upsalquitch River										
Jun 1-15	0	1	0	0	0	-	25.0	-	-	-
Jun 16-30	1	1	0	1	1	25.0	25.0	-	14.3	33.3
Jul 1-15	1	1	2	0	1	25.0	25.0	50.0	-	33.3
Jul 16-31	0	0	2	3	1	-	-	50.0	42.9	33.3
Aug 1-15	0	1	0	2	0	-	25.0	-	28.6	-
Aug 16-31	2	0	0	1	0	50.0	-	-	14.3	-
Overall	4	4	4	7	3	100.0	100.0	100.0	100.0	100.0
Northwest Upsalquitch River[1]										
Jul 16-31	0	0	0	1	1	-	-	-	100.0	12.5
Sep 16-30	0	0	0	0	1	-	-	-	-	12.5
Oct 1-15	0	0	0	0	6	-	-	-	-	75.0
Overall	0	0	0	1	8	-	-	-	100.0	100.0
Southeast Upsalquitch River										
Jul 16-31	1	0	0	0	0	100.0	-	-	-	-
Overall	1	0	0	0	0	100.0	-	-	-	-
Patapedia River										
Jun 1-15	0	0	1	0	1	-	-	100.0	-	100.0
Jun 16-30	1	0	0	0	0	100.0	-	-	-	-
Overall	1	0	1	0	1	100.0	-	100.0	-	100.0
Little Main Restigouche River										
Overall	0	0	0	0	0	-	-	-	-	-
Kedgwick River[2]										
Jun 1-15	0	0	1	0	0	-	-	100.0	-	-
Aug 16-31	1	0	0	0	0	100.0	-	-	-	-
Oct 16-31	0	0	0	24	3	-	-	-	100.0	100.0
Overall	1	0	1	24	3	100.0	-	100.0	100.0	100.0
Restigouche River[3]										
Jun 16-30	0	0	0	0	1	-	-	-	-	20.0
Aug 16-31	0	0	0	0	4	-	-	-	-	80.0
Overall	0	0	0	0	5	-	-	-	-	100.0

[1]1981 samples after Aug 31 were purposely taken from fairly large salmon.
[2]1980 and 1981 samples were taken from broodstock.
[3]1981 samples were purposely taken from 7.2-kg and over salmon.

TABLE 19. Percentage composition of freshwater (smolt) ages in each sea-age group (first previous spawning trip) of previously spawned large salmon caught in the Restigouche River system, 1972-76.

Sea age (years)	No. of fish					Percent of sample									
						Smolt age - 2 yr					Smolt age - 3 yr				
	1972	1973	1974	1975	1976	1972	1973	1974	1975	1976	1972	1973	1974	1975	1976
Upsalquitch River															
1	4	4	0	2	4	50.0	75.0	-	100.0	25.0	50.0	25.0	-	-	75.0
2	0	1	1	0	0	-	-	-	-	-	-	100.0	100.0	-	-
Overall	4	5	1	2	4	50.0	60.0	-	100.0	25.0	50.0	40.0	100.0	-	75.0
Northwest Upsalquitch River															
1	2	0	1	0	1	50.0	-	100.0	-	100.0	50.0	-	-	-	-
2	0	0	0	0	1	-	-	-	-	-	-	-	-	-	100.0
Overall	2	0	1	0	2	50.0	-	100.0	-	50.0	50.0	-	-	-	50.0
Southeast Upsalquitch River															
Overall	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
Patapedia River															
2	0	0	1	0	0	-	-	-	-	-	-	-	100.0	-	-
Overall	0	0	1	0	0	-	-	-	-	-	-	-	100.0	-	-
Little Main Restigouche River															
1	1	0	1	0	0	-	-	-	-	-	100.0	-	100.0	-	-
2	0	0	0	0	2	-	-	-	-	-	-	-	-	-	100.0
Overall	1	0	1	0	2	-	-	-	-	-	100.0	-	100.0	-	100.0
Kedgwick River															
1	2	1	0	1	3	-	-	-	-	-	100.0	100.0	-	100.0	100.0
2	0	0	0	1	9	-	-	-	-	11.1	-	-	-	100.0	88.9
3	4	1	4	0	12	25.0	-	-	-	16.7	75.0	100.0	100.0	-	83.3
Overall	6	2	4	2	24	16.7	-	-	-	12.5	83.3	100.0	100.0	100.0	87.5
Restigouche River															
Overall	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-

TABLE 20. Percentage composition of freshwater (smolt) ages in each sea-age group (first previous spawning trip) of previously spawned large salmon caught in the Restigouche River system, 1977-81.

Sea age (years)	No. of fish					Percent of sample														
						Smolt age - 2 yr					Smolt age - 3 yr					Smolt age - 4 yr				
	1977	1978	1979	1980	1981	1977	1978	1979	1980	1981	1977	1978	1979	1980	1981	1977	1978	1979	1980	1981
Upsalquitch River																				
1	3	3	4	5	2	66.7	-	25.0	-	50.0	33.3	100.0	75.0	100.0	50.0	-	-	-	-	-
2	1	1	0	1	1	-	-	-	-	-	100.0	100.0	-	100.0	100.0	-	-	-	-	-
3	0	0	0	1	0	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-
Overall	4	4	4	7	3	50.0	-	25.0	-	33.3	50.0	100.0	75.0	100.0	66.7	-	-	-	-	-
Northwest Upsalquitch River																				
1	0	0	0	1	1	-	-	-	-	-	-	-	-	100.0	100.0	-	-	-	-	-
2	0	0	0	0	7	-	-	-	-	42.9	-	-	-	-	57.1	-	-	-	-	-
Overall	0	0	0	1	8	-	-	-	-	37.5	-	-	-	100.0	62.5	-	-	-	-	-
Southeast Upsalquitch River																				
1	1	0	0	0	0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-
Overall	1	0	0	0	0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-
Patapedia River																				
3	1	0	1	0	1	-	-	-	-	-	100.0	-	100.0	-	-	-	-	-	-	100.0
Overall	1	0	1	0	1	-	-	-	-	-	100.0	-	100.0	-	-	-	-	-	-	100.0
Little Main Restigouche River																				
Overall	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kedgwick River																				
1	0	0	0	1	2	-	-	-	-	-	-	-	-	100.0	100.0	-	-	-	-	-
2	0	0	1	11	1	-	-	-	-	-	-	-	100.0	100.0	100.0	-	-	-	-	-
3	1	0	0	12	0	-	-	-	8.3	-	100.0	-	-	83.3	-	-	-	-	8.3	-
Overall	1	0	1	24	3	-	-	-	4.2	-	100.0	-	100.0	91.7	100.0	-	-	-	4.2	-
Restigouche River																				
2	0	0	0	0	1	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-
3	0	0	0	0	3	-	-	-	-	33.3	-	-	-	-	66.7	-	-	-	-	-
Overall	0	0	0	0	4	-	-	-	-	25.0	-	-	-	-	75.0	-	-	-	-	-

TABLE 21. Percentage composition of freshwater (smolt) ages in each sea-age group (second previous spawning trip) of previously spawned large salmon caught in the Restigouche River River system, 1972-76.

Sea age (years)	No. of fish					Percent of sample Smolt age - 3 yr				
	1972	1973	1974	1975	1976	1972	1973	1974	1975	1976
Upsalquitch River										
Overall	0	0	0	0	0	-	-	-	-	-
Northwest Upsalquitch River										
Overall	0	0	0	0	0	-	-	-	-	-
Southeast Upsalquitch River										
Overall	0	0	0	0	0	-	-	-	-	-
Patapedia River										
Overall	0	0	0	0	0	-	-	-	-	-
Little Main Restigouche River										
Overall	0	0	0	0	0	-	-	-	-	-
Kedgwick River										
4	0	0	0	0	1	-	-	-	-	100.0
5	0	1	0	0	1	-	100.0	-	-	100.0
Overall	0	1	0	0	2	-	100.0	-	-	100.0
Restigouche River										
Overall	0	0	0	0	0	-	-	-	-	-

TABLE 22. Percentage composition of freshwater (smolt) ages in each sea-age group (second previous spawning trip) of previously spawned large salmon caught in the Restigouche River system, 1977-81.

Sea age (years)	No. of fish					Percent of sample									
						Smolt age - 2 yr					Smolt age - 3 yr				
	1977	1978	1979	1980	1981	1977	1978	1979	1980	1981	1977	1978	1979	1980	1981
Upsalquitch River															
3	0	0	0	1	0	-	-	-	-	-	-	-	-	100.0	-
Overall	0	0	0	1	0	-	-	-	-	-	-	-	-	100.0	-
Northwest Upsalquitch River															
4	0	0	0	0	3	-	-	-	-	66.7	-	-	-	-	33.3
Overall	0	0	0	0	3	-	-	-	-	66.7	-	-	-	-	33.3
Southeast Upsalquitch River															
Overall	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
Patapedia River															
5	1	0	0	0	0	-	-	-	-	-	100.0	-	-	-	-
Overall	1	0	0	0	0	-	-	-	-	-	100.0	-	-	-	-
Little Main Restigouche River															
Overall	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
Kedgwick River															
5	0	0	0	2	0	-	-	-	-	-	-	-	-	100.0	-
Overall	0	0	0	2	0	-	-	-	-	-	-	-	-	100.0	-
Restigouche River															
5	0	0	0	0	1	-	-	-	-	100.0	-	-	-	-	-
Overall	0	0	0	0	1	-	-	-	-	100.0	-	-	-	-	-

TABLE 23. Percentage composition of freshwater (smolt) ages in each sea-age group (third previous spawning trip) of previously spawned large salmon caught in the Restigouche River River system, 1972-76.

Sea age (years)	No. of fish					Percent of sample Smolt age - 3 yr				
	1972	1973	1974	1975	1976	1972	1973	1974	1975	1976
Upsalquitch River										
Overall	0	0	0	0	0	-	-	-	-	-
Northwest Upsalquitch River										
Overall	0	0	0	0	0	-	-	-	-	-
Southeast Upsalquitch River										
Overall	0	0	0	0	0	-	-	-	-	-
Patapedia River										
Overall	0	0	0	0	0	-	-	-	-	-
Little Main Restigouche River										
Overall	0	0	0	0	0	-	-	-	-	-
Kedgwick River										
6	0	0	0	0	1	-	-	-	-	100.0
Overall	0	0	0	0	1	-	-	-	-	100.0
Restigouche River										
Overall	0	0	0	0	0	-	-	-	-	-

TABLE 24. Percentage composition of freshwater (smolt) ages in each sea-age group (third previous spawning trip) of previously spawned large salmon caught in the Restigouche River River system, 1977-81.

Sea age (years)	No. of fish					Percent of sample Smolt age - 3 yr				
	1977	1978	1979	1980	1981	1977	1978	1979	1980	1981
Upsalquitch River										
Overall	0	0	0	0	0	-	-	-	-	-
Northwest Upsalquitch River										
Overall	0	0	0	0	0	-	-	-	-	-
Southeast Upsalquitch River										
Overall	0	0	0	0	0	-	-	-	-	-
Patapedia River										
7	1	0	0	0	0	100.0				
Overall	1	0	0	0	0	100.0	-	-	-	-
Little Main Restigouche River										
Overall	0	0	0	0	0	-	-	-	-	-
Kedgwick River										
Overall	0	0	0	0	0	-	-	-	-	-
Restigouche River										
Overall	0	0	0	0	0	-	-	-	-	-

TABLE 25. Age composition (age structure) of previously spawned large salmon of the Restigouche River system, 1972-76.

Age structure	No. of fish					Percent of sample				
	1972	1973	1974	1975	1976	1972	1973	1974	1975	1976
Upsalquitch River										
2.3,1	2	3	0	2	1	50.0	60.0	-	100.0	25.0
3.3,1	2	1	0	0	3	50.0	20.0	-	-	75.0
3.4,2	0	1	1	0	0	-	20.0	100.0	-	-
Overall	4	5	1	2	4	100.0	100.0	100.0	100.0	100.0
Northwest Upsalquitch River										
2.2,1	0	0	1	0	0	-	-	100.0	-	-
2.3,1	1	0	0	0	1	50.0	-	-	-	50.0
3.3,1	1	0	0	0	0	50.0	-	-	-	-
3.4,2	0	0	0	0	1	-	-	-	-	50.0
Overall	2	0	1	0	2	100.0	-	100.0	-	100.0
Southeast Upsalquitch River										
Overall	0	0	0	0	0	-	-	-	-	-
Patapedia River										
3.4,2	0	0	1	0	0	-	-	100.0	-	-
Overall	0	0	1	0	0	-	-	100.0	-	-
Little Main Restigouche River										
3.3,1	1	0	1	0	0	100.0	-	100.0	-	-
3.4,2	0	0	0	0	2	-	-	-	-	100.0
Overall	1	0	1	0	2	100.0	-	100.0	-	100.0
Kedgwick River										
2.4,2	0	0	0	0	1	-	-	-	-	4.2
2.5,3	1	0	0	0	2	16.7	-	-	-	8.3
3.3,1	2	1	0	1	3	33.3	50.0	-	50.0	12.5
3.4,2	0	0	0	1	7	-	-	-	50.0	29.2
3.4,3	0	0	0	0	1	-	-	-	-	4.2
3.5,3	3	0	4	0	8	50.0	-	100.0	-	33.3
3.7,3,5	0	1	0	0	1	-	50.0	-	-	4.2
3.8,2,4,6	0	0	0	0	1	-	-	-	-	4.2
Overall	6	2	4	2	24	100.0	100.0	100.0	100.0	100.0
Restigouche River										
Overall	0	0	0	0	0	-	-	-	-	-

TABLE 26. Age composition (age structure) of previously spawned large salmon of the Restigouche River system, 1977-81.

Age structure	No. of fish					Percent of sample				
	1977	1978	1979	1980	1981	1977	1978	1979	1980	1981
Upsalquitch River										
2.2,1	1	0	0	0	1	25.0	-	-	-	33.3
2.3,1	1	0	1	0	0	25.0	-	25.0	-	-
3.2,1	0	0	0	4	0	-	-	-	57.1	-
3.3,1	1	3	3	0	1	25.0	75.0	75.0	-	33.3
3.3,2	0	0	0	0	1	-	-	-	-	33.3
3.4,1,3	0	0	0	1	0	-	-	-	14.3	-
3.4,2	1	1	0	1	0	25.0	25.0	-	14.3	-
3.5,3	0	0	0	1	0	-	-	-	14.3	-
Overall	4	4	4	7	3	100.0	100.0	100.0	100.0	100.0
Northwest Upsalquitch River[1]										
2.3,2	0	0	0	0	1	-	-	-	-	12.5
2.6,2,4	0	0	0	0	2	-	-	-	-	25.0
3.2,1	0	0	0	1	0	-	-	-	100.0	-
3.3,1	0	0	0	0	1	-	-	-	-	12.5
3.4,2	0	0	0	0	3	-	-	-	-	37.5
3.6,2,4	0	0	0	0	1	-	-	-	-	12.5
Overall	0	0	0	1	8	-	-	-	100.0	100.0
Southeast Upsalquitch River										
3.3,1	1	0	0	0	0	100.0	-	-	-	-
Overall	1	0	0	0	0	100.0	-	-	-	-
Patapedia River										
3.5,3	0	0	1	0	0	-	-	100.0	-	-
3.8,3,5,7	1	0	0	0	0	100.0	-	-	-	-
4.5,3	0	0	0	0	1	-	-	-	-	-
Overall	1	0	1	0	1	100.0	-	100.0	-	100.0
Little Main Restigouche River										
Overall	0	0	0	0	0	-	-	-	-	-
Kedgwick River[2]										
2.5,3	0	0	0	1	0	-	-	-	4.2	-
3.3,1	0	0	0	1	2	-	-	-	4.2	66.7
3.4,2	0	0	1	11	1	-	-	-	45.8	33.3
3.5,3	1	0	0	8	0	100.0	-	100.0	33.3	-
3.7,3,5	0	0	0	2	0	-	-	-	8.3	-
4.5,3	0	0	0	1	0	-	-	-	4.2	-
Overall	1	0	1	24	3	100.0	-	100.0	100.0	100.0
Restigouche River[3]										
2.7,3,5	0	0	0	0	1	-	-	-	-	25.0
3.4,2	0	0	0	0	1	-	-	-	-	25.0
3.5,3	0	0	0	0	2	-	-	-	-	50.0
Overall	0	0	0	0	4	-	-	-	-	100.0

[1]1981 samples after Aug 31 were purposely taken from fairly large salmon.
[2]1980 and 1981 samples were taken from broodstock.
[3]1981 samples were purposely taken from 7.2-kg and over salmon.

TABLE 27. Age composition (total age in years) of previously spawned large salmon of the Restigouche River system, 1972-76.

Total age (years)	From spawning year					No. of fish					Percent of sample				
	1972	1973	1974	1975	1976	1972	1973	1974	1975	1976	1972	1973	1974	1975	1976
Upsalquitch River															
5	1966	1967	-	1969	1970	2	3	0	2	1	50.0	60.0	-	100.0	25.0
6	1965	1966	-	-	1969	2	1	0	0	3	50.0	20.0	-	-	75.0
7	-	1965	1966	-	-	0	1	1	0	0	-	20.0	100.0	-	-
Overall						4	5	1	2	4	100.0	100.0	100.0	100.0	100.0
Northwest Upsalquitch River															
4	-	-	1969	-	-	0	0	1	0	0	-	-	100.0	-	-
5	1966	-	-	-	1970	1	0	0	0	1	50.0	-	-	-	50.0
6	1965	-	-	-	-	1	0	0	0	0	50.0	-	-	-	-
7	-	-	-	-	1968	0	0	0	0	1	-	-	-	-	50.0
Overall						2	0	1	0	2	100.0	-	100.0	-	100.0
Southeast Upsalquitch River															
Overall	-	-	-	-	-	0	0	0	0	0	-	-	-	-	-
Patapedia River															
7	-	-	1966	-	-	0	0	1	0	0	-	-	100.0	-	-
Overall						0	0	1	0	0	-	-	100.0	-	-
Little Main Restigouche River															
6	1965	-	1967	-	-	1	0	1	0	0	100.0	-	100.0	-	-
7	-	-	-	-	1968	0	0	0	0	2	-	-	-	-	100.0
Overall						1	0	1	0	2	100.0	-	100.0	-	100.0
Kedgwick River															
6	1965	1966	-	1968	1969	2	1	0	1	4	33.3	50.0	-	50.0	16.7
7	1964	-	-	1967	1968	1	0	0	1	10	16.7	-	-	50.0	41.7
8	1963	-	1965	-	1967	3	0	4	0	8	50.0	-	100.0	-	33.3
10	-	1962	-	-	1965	0	1	0	0	1	-	50.0	-	-	4.2
11	-	-	-	-	1964	0	0	0	0	1	-	-	-	-	4.2
Overall						6	2	4	2	24	100.0	100.0	100.0	100.0	100.0
Restigouche River															
Overall						0	0	0	0	0	-	-	-	-	-

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TABLE 28. Age composition (total age in years) of previously spawned large salmon of the Restigouche River system, 1977-81.

Total age (years)	From spawning year					No. of fish					Percent of sample				
	1977	1978	1979	1980	1981	1977	1978	1979	1980	1981	1977	1978	1979	1980	1981
Upsalquitch River															
4	1972	–	–	–	1976	1	0	0	0	1	25.0	–	–	–	33.3
5	1971	–	1973	1974	–	1	0	1	4	0	25.0	–	25.0	57.1	–
6	1970	1971	1972	–	1974	1	0	3	0	2	25.0	75.0	75.0	–	66.7
7	1969	1970	–	1972	–	1	1	3	2	0	25.0	25.0	–	28.6	–
8	–	–	–	1971	–	1	0	0	1	0	–	–	–	14.3	–
Overall						4	4	4	7	3	100.0	100.0	100.0	100.0	100.0
Northwest Upsalquitch River[1]															
5	–	–	–	1974	1975	0	0	0	1	1	–	–	–	100.0	12.5
6	–	–	–	–	1974	0	0	0	0	1	–	–	–	–	12.5
7	–	–	–	–	1973	0	0	0	0	3	–	–	–	–	37.5
8	–	–	–	–	1972	0	0	0	0	2	–	–	–	–	25.0
9	–	–	–	–	1971	0	0	0	0	1	–	–	–	–	12.5
Overall						0	0	0	1	8	–	–	–	100.0	100.0
Southeast Upsalquitch River															
6	1970	–	–	–	–	1	0	0	0	0	100.0	–	–	–	–
Overall						1	0	0	0	0	100.0	–	–	–	–
Patapedia River															
8	–	–	1970	–	–	0	0	1	0	0	–	–	100.0	–	–
9	–	–	–	–	1971	0	0	0	0	1	100.0	–	–	–	100.0
11	1965	–	–	–	–	1	0	0	0	0	100.0	–	100.0	–	–
Overall						1	0	1	0	1	100.0	–	100.0	–	100.0
Little Main Restigouche River															
Overall						0	0	0	0	0	–	–	–	–	–
Kedgwick River[2]															
6	–	–	–	1973	1974	0	0	0	1	1	2	–	–	–	4.2	66.7
7	–	–	1971	1972	1973	0	0	0	0	12	1	–	–	100.0	50.0	33.3
8	1968	–	–	1971	–	1	0	0	0	8	0	100.0	–	–	33.3	–
9	–	–	–	1970	–	0	0	0	0	1	0	–	–	–	4.2	–
10	–	–	–	1969	–	0	0	0	0	2	0	–	–	–	8.3	–
Overall						1	0	1	0	24	3	100.0	–	100.0	100.0	100.0
Restigouche River[3]															
7	–	–	–	–	1973	0	0	0	0	0	1	–	–	–	–	25.0
8	–	–	–	–	1972	0	0	0	0	0	2	–	–	–	–	50.0
9	–	–	–	–	1971	0	0	0	0	0	1	–	–	–	–	25.0
Overall						0	0	0	0	0	4	–	–	–	–	100.0

[1]1981 samples after Aug 31 were purposely taken from fairly large salmon.
[2]1980 and 1981 samples were taken from broodstock.
[3]1981 samples were purposely taken from 7.2-kg and over salmon.

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Tim Lutzac, Fisheries Research Branch Biologist, and Paul Cameron, Manager, Charlo Hatchery, who provided scale samples from broodstock.

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POOR

QUALITY

ORIGINAL